Illustrated FOREST & OUTDOORS

MARCH
1947
recd. Mar. 24

Montreal, Canada

SPRING COMES TO AN OTTAWA PARK

Photo: Malak

FOREST RESOURCES

to Stagger the Imagination

"The figures of Canada's forest resources stagger the imagination. Only two other countries, Russia and Brazil, have greater forested areas. Canada's total is about 1¼ million square miles. The productive area, 770,000 square miles, is about equal to the combined areas of the British Isles, France, Spain, Portugal, the Netherlands, Denmark and Sweden."

—Excerpt from a Monthly Letter of The Royal Bank of Canada

The Royal Bank assists in the financial operations necessary to convert Canada's vast forest resources into pulp and paper, lumber, and many other products for domestic use and for export.

THE ROYAL BANK OF CANADA

ASSETS EXCEED $2,130,000,000

Another housekeeping worry!

GRIZZLIES HAVE NO CEILING PRICE

Oh, yes, you can pay $5,000 for a fortnight's jolly fun with outfitters, guides, ponies and such like.

by CLIFFORD R. KOPAS

TO have a "business" that takes you into the fields and forests in the pleasantest months of the year, and for which the equipment is guns and tents and boats . . . that sounds about ideal.

It is the business of about ten thousand Canadians.

Every year ten-thousand Canadians act as guides, advisors, friends and entertainers to ten thousand people who come from "across the line" and across the "big waters" to hunt in this fair Dominion of Canada. For the relatively unspoiled game resources of this country are known to others in less fortunate or more densely populated countries. And every year these ten-thousand visitors leave a large amount of money in this country.

In some sections of British Columbia it is accepted that every grizzly bear is worth a thousand dollars to the province in the way of moneys expended by hunters.

Since Canada has practically a monopoly on grizzly bears, and British Columbia is the major share-holder, we shall use British Columbia as a fair example.

When a non-resident comes to British Columbia to hunt, he buys a game license that ranges from $15 to $50. Then, when he has completed a successful hunt, he pays as high as $40.00 for the right to export each of his trophies. Because of the extensive variety of game allowed, his trophy fees might run as high as a hundred and fifty dollars for one successful hunt.

In between the purchase of his license and the export of his trophies he hires a guide at rates varying from six to sixteen dollars per day. He hires an outfit for the trail from an outfitter. According to his purse or his desires, this outfit might range from three to ten horses, and include cook, guide, horse-wrangler and packer. He might go into the woods for two or three days or be gone for two or three weeks, with a proportionate amount spent for wages, hire of horses and equipment, and food.

Besides these possibly major items there is railway, boat or bus fares; there is a list of hotel or lodge bills. There are personal expenses in the way of clothes and ammunition. There are tips.

Some expeditions into game countries leave as much as five thousand dollars in a district. (At Telegraph Creek an outfitter refuses to go into the field with a party for less than five thousand dollars). These figures do not count governmental fees and railway or boat fares.

Some sport-catering outfits guarantee that their sportsmen shall get good shots at all the good trophies the law allows; and all of them try to give the best satisfaction, for this is one business that depends on good-will and word-of-mouth advertising. To be mentioned favorably in hunters' circles is a sure promise of more business to come, and the reverse also holds true. Besides, finding this method of advertising to be effective, very few sports-catering outfits have developed the technique nor spent the money for a heavy splash of advertising.

Mutual understanding — a study by D. Clemson.

These business men whose office suite is a forested mountain and whose formal attire is a plaid wool shirt and a pair of overalls protects his business by being a game conservationist. If necessary he sees that his hunter complies with the game laws (he is by nature of being a licensed guide also required by law to enforce game laws) for no other reason than that if one hunter despoils the game resources, successive hunters will be disappointed.

In the most colorful business the rancher, the trapper, the backwoods resident turns into cash idle time and his knowledge of the forest and its denizens. If he has the right personality, which consists mostly of a desire to be the best kind of a friend to his customer, and has the knowledge, and the district has the game, there is no limit to which his business might grow.

With its demands on so many and so varied trades and peoples it is impossible to say just how far-reaching is the bear-hunter's dollar, but it is likely that there is scarcely a person in the country who is not affected in some way by this desire of sportsmen to take the fiercest of American big game animals, the grizzly bear.

AN INDUSTRY THAT ASKS NO CRUTCHES

The pulp and paper industry has made its own way against world competition: without subsidies, price floors, guarantees or other forms of public financial assistance. The industry has at times disappointed investors but, in war or peace, it has always been a contributor to, and never a drain on the public treasury. Canada has no better asset, nor any worth more care.

"I see by the paper . . ."

CURRENT events . . . history in the making . . . industrial developments . . . news from home and abroad . . . each day the world is laid at our doorstep—on newsprint.

Paper is the key to our way of life . . . it aids in the advance of business, science, culture and religion . . . it conveys messages and protects food and countless other goods. Truly paper is woven into the structure of civilization.

Canada's pulp and paper industry has conquered the wastelands . . . harnessed rivers for the development of power . . . built up foreign trade . . . and aided transport, manufacture and agriculture in all parts of the Dominion.

Canadian Ingersoll-Rand Co. Limited
head office - MONTREAL QUE. —— *works* - SHERBROOKE QUE. 0-10

AIR AND GAS COMPRESSORS • ROCK DRILLS • HOISTS • PUMPS • BLOWERS • CONDENSERS • AIR TOOLS

THE CLIMB FROM 'MUD SHACK' STANDARDS

by Dr. WALTER LOWDERMILK

IN the Near East, home of large and prosperous populations of ancient empires, per capita consumption (of forest materials) is believed to be the lowest for any important area of the world. Timber resources, never very great, have been practically destroyed until dung is a substitute for wood fuel; and in northern Syria, a region containing a "hundred dead cities" in whose houses much timber was used, nowadays mud beehive houses are built without a splinter of wood. Per capita consumption must be below one cubic foot in the Holy Land, another region where population has decline far below that of its prosperous past.

To one seeking a guide to the minimum requirements of wood in a modern society, the per capita consumption of Great Britain has special meaning. It is reasonable to assume that in a country having to import 95 per cent of wood products, chiefly construction material, wood is not wasted. And because of accessibility to sea lanes and of short inland hauls, the cost of delivery of imported wood products is not so great as in large continental areas. Per capita consumption of wood by Great Britain may be accepted as the minimum requirements of wood products, except for fuel, in a modern industrialized society of the better standards of living. This consumption does not include fuel because England is fortunately well supplied with coal that is generally used for this purpose. Since fuel wood cannot be profitably shipped far, it will always be primarily a local product. Growing wood lots well distributed throughout a country should be favored in the sound development of a nation. The figure for Great Britain, 23.2 cubic feet per person

(*Please turn to page 82*)

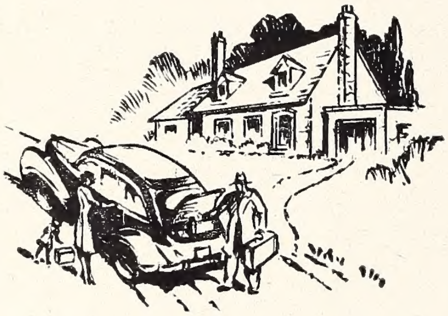
Coast deer on Malahat, Vancouver Island.

Photo by Steffens-Colmer.

AN INSIDE STORY OF A LIFE ASSURANCE SERVICE

The Balance Sheet of Canada's largest life assurance company reveals 1946 as one of the most progressive periods since the Sun Life issued its first policy 76 years ago, but figures alone tell little of the human story behind this great co-operative enterprise. For instance, last year over $100 million was paid out in benefits. What did this mean to the thousands of policyholders and beneficiaries who shared it? Here in brief is some of the story between the lines:

During 1946 over $31 million was paid in DEATH BENEFITS, providing a continuing income for widows and children and assuring financial security to thousands of homes.



Another $30 million was paid in ENDOWMENTS, furnishing for many the cash or life income necessary to carry out long cherished plans.

$14 million was disbursed in ANNUITIES and PENSIONS, bringing independence, security and contentment at a time of life which should be free of all worries and responsibilities.

$2 million was credited to policyholders in DISABILITY BENEFITS, assuring the automatic payment of premiums for thousands who were prevented from earning a living by illness or accident.

From the 1946 Annual Report

BENEFITS PAID SINCE ORGANIZATION
$1,919,999,149

NEW ASSURANCES IN 1946
$348,155,491

ASSURANCES IN FORCE
$3,573,132,753

$14 million was paid out in DIVIDENDS, reducing the cost of assurance for the Company's million participating policyholders.

SUN LIFE OF CANADA

Woodlands and farmlands of Manitoba

Question Box of Prairie Problems

by ALAN BEAVEN, Manager, Western Division Canadian Forestry Association

Q. Can trees be planted on last year's stubble?

A. Not if assured success is your object. Trees should always be planted on well-prepared summer fallow. It has been found that the better prepared the soil, the better the young trees will do.

Q. Why are spruce and pine so hard to start?

A. Planted with care under proper conditions the evergreens are not hard to start, but they do require more attention than the broad-leafed trees. The evergreen has a much more delicate rooting system than the trees which shed their leaves. It has an intensive system of fibrous roots filled with a resinous gum, rather than the lighter syrup found in ash, elm, etc. For this reason the rooting system of the evergreen must be given great care when moving it. They should **never** be allowed to dry out. Five minutes exposure to strong sunlight can kill the little tree. Spruce and pine are shipped out to farming people on the Prairie from the Forest Nursery Station at Indian Head when they are four to six years of age. They are about a foot tall. On the open prairie they should be planted inside the protection of other trees. However, success can be attained by planting corn or sunflowers the year before and leaving the stocks stand as a guard for the spruce and pine. The little evergreens should also be shaded from the sun for the first year. They pay back this early attention in a few years, becoming as they get older one of the hardiest trees for western planting.

Q. Which is more suitable, spruce or pine?

A. By all means, spruce. Much more success has been met with in spruce planting than in pine. The spruce is a more compact tree, and hence makes a much thicker and heavier belt than pine.

Q. Are there different varieties of spruce, and if so, which is the best?

A. Yes. For prairie planting we use white, blackhill and colorado. It is likely that both colorado and blackhill are of the same basic stock, as white, which due to geography and other conditions assumed through the years characteristics of their own. The Colorado ranges from deep green to light and dark blue. Its needles are heavier and sharper, and appear in stronger clusters. The blackhill, is more like the white in appearance, usually takes a very lovely pyramidal shape, with dark foliage. For general prairie planting they have all done well. The forest nursery station ships out white and colorado. If one can be said to be more suitable than the other two it would be the colorado, which though it grows slightly slower than the white and blackhill, seems a little bit hardier. When spruce in the drought years was attacked by the spruce mite and the scale, the tougher needles of the colorado apparently repelled them, as in mixed plantings the white were often heavily infested, while none appeared on the colorado.

Q. What is a Koster spruce?

A. Koster spruce were developed by a horticulturist named Koster. When the colorado spruce are seedlings the ones with the bluest colouring are chosen and root-grafted to a white spruce root. They then retain their blue coloring all during life. Colorado spruce as they grow alter their colouring from year to year; some years they are a dark blue, but the same tree next year may be light green. The graft keeps the colour constant.

Q. How deep should trees be planted?

A. When a tree is taken up from the soil the ground or surface mark on it trunk is plainly visible. Trees should be planted just a little deeper than this mark. By the time the tree is settled and growing in its new position it will be found that with the ground settling, the tree will be in about the same position in the soil as it was before moving. When planting the small trees for shelter belts, sent out from Indian Head, the usual method of planting in numbers is using an open furrow, which is plowed from 5 to 8 inches deep. The little trees are placed on the bottom and firmly tramped into position by pulling each in from each side with the feet. Then the furrow is filled in completely. The small spruce are planted just a little deeper than their old earth mark as outlined above.

Q. Should trees in a shelter belt be pruned to make them grow tall?

A. No. The main object of the shelter belt is protection, protection from the ground up, but the first fifteen feet from the ground is the most important. If you prune the trees in the shelter belt they are inclined to grow taller, but the lower protection is lost, and the purpose of the belt is defeated. Young shelter belts by some owners have been pruned of all their lower branches, with the result they get tall and thin with a cluster of leaves at the top, giving the appearance of a field of binder whips. The wind beats them back and forth, and from then on they can make little progress. To play safe never take a pruning knife into a shelter belt.

Q. How can a caragana hedge that has spread out too much be controlled?

A. By pruning. Caragana lends itself to heavy pruning. It can be cut back or trimmed at any time. Sometimes the best answer for a heavy hedge around the home, which has spread out too much is to cut it off about 6 inches above the ground, and let it start over again. When caragana is used as the outer row in a shelter belt it should not be pruned at all, but left to grow.

Q. What is the best drought resistant lawn grass?

A. We have found crested wheat grass amongst the best, if not the best. All prairie lawns will dry up and burn badly in the middle of the summer, unless of course watered, which is impossible in nearly all cases on the prairie farm. However crested wheat will come out of the winter in good shape, and will green up after rain, and go into the winter in good shape. Another good mixture is Canadian blue grass, with a mother crop. Our western seed houses are now selling some suitable lawn mixtures.

The Redwood Forests of California.

Gatineau Park never loses its attractions, winter or summer.

GREENWOODS FOR THE NATIONAL CAPITAL

by PHIL SHACKLETON

Photos by National Film Board and Phil Shackleton

ONLY 15 miles from Ottawa, capital city citizens may find a year-round playground in the Laurentian hills of Quebec. This is Gatineau Park, over 20,000 acres of wooded hills, tiny lakes and well kept trails, administered by the Federal District Commission.

The Gatineau range of hills, hemmed in by the Ottawa and Gatineau Rivers, rolls back from the provincial boundary into Quebec. In these hills bear, deer, beaver, racoon, partridge, duck and other birds and animals are protected at all times. A forest which includes an extremely wide range of tree species is no longer cut.

The Commission took over the area as a park only eight years ago, at a time when the district had been burnt over. Since then the fire scars have been hidden by new growth. Today the rapidly growing park seems almost a virginal wildlife preserve.

Plans to extend the park to 50,000 acres are included in the Commission's latest report. In the development of the 900-square mile area centering about Ottawa and Hull, the National Capital Planning Committee was established to act in advisory capacity to the Federal District Commission.

Other plans include the construction of cabins, shelters, bath houses and other structures designed to attract more people to the park. Superintendent E. S. Richards points out, "Gatineau Park brings the countryside into the lives of people who would otherwise have no chance of knowing it."

Keogan's Lodge is a Commission-built hostel deep in the park. Two large dormitories provide sleeping facilities for as many as 60 guests. The overnight fee is small. Cooking facilities and equipment are provided without cost. Skiers make up the bulk of the patronage

Another government-owned hostel is established at the camping grounds on Phillips Lake. Here visitors who are hardy may rent tents. Picnic grounds which dot the park are supplied with tables and rustic benches. Numerous springs have been exploited to fashion rustic drinking fountains in picnicking areas.

Easily reached by highway from the Ottawa district, Gatineau Park must be seen on foot. About 100 miles of well kept trails, meant only for skiers and hikers, interlace the park. All are marked with weathered, natural-finish wooden signs.

Although about 200,000 visit the park each summer, it is most popular with skiing enthusiasts. Trails laid out in circular pattern provide matchless ski runs through the Gatineau hills. Camp Fortune, only a few miles from the Ottawa highway, is the headquarters of the Ottawa Ski Club.

Today the park is supervised by five rangers, each of whom patrols a section. Their duties consist mainly in cleaning up after sloppy picnickers and maintaining a constant vigil for fire. Five rangers today are sufficient, but if present plans are realized, the Commission will have to double its staff to look after the rapidly growing park.

The March of the Children

An almost continuous procession of school children and teachers of five cities of Manitoba and Saskatchewan has been marching to Canadian Forestry Association meetings during January and February.

In Winnipeg, Mr. Alan Beaven and Mr. Murray Pratt, of the Association's western staff, held no fewer than 101 meetings in seven weeks, with a total attendance of 20,485. Displays of educational motion pictures, with stimulating addresses, brought the young folk and their instructors into eager partnership with the cause of conservation.

At Regina, Moose Jaw and Saskatoon, Major H. S. Roberts, of the Canadian Forestry Association staff, gathered together a total of 16,890 students and teachers in this course of lectures and motion picture displays between January 13th and February 23rd. Sixty-four meetings were required, held usually in the assembly halls of the local schools. Major Roberts proceeded to Prince Albert, Saskatchewan for a further chain of school meetings.

The prairie staff officers of the Association have thus conducted 165 assemblies, with 37,375 attending between the middle of January and the latter days of February. This is the first time that winter gatherings have been attempted on such a scale.

Excellent co-operation was afforded by the various Boards of Education and School Principals and it appears probable that the programme will be repeated each year, covering the city schools of Manitoba, Saskatchewan and Alberta. The country and village schools are largely covered by the Canadian Forestry Association lecture tours from Spring to Fall.

"You just can't satisfy those kids" ! A study of a robin household by Armstrong Roberts.

WINTER WORD

There must be a strange white word for this:
Slow as the flakes that enchant the air
With their languid dance and their clinging kiss
And their veils cast off for the hills to wear.

Deep as the drifting by wood and stone
And deep enough to rebury spring ;
Soft as the sigh and the muted tone
Of the glissade's sibilant whispering.

Still as the river's glacial trance,
As the great fir heavy with snow and night ;
For the vapored breath and the wintered glance
There must be a word that is strange and white.

Gilean Douglas

120,000 FORESTRY JOBS

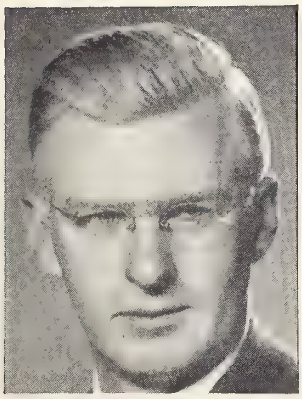
Looking ahead 40 years in forestry, Dr. Hardy L. Shirley, assistant dean of The New York State College of Forestry, Syracuse University, believes that the heavy enrollments in forestry schools will continue and during the next two or three years may increase, and that the demands of the future for well-trained graduates will justify larger enrollments.

All phases of the profession are included in Dr. Shirley's detailed estimates which total 120,000 forestry jobs in 40 years. He says, "Even if our schools turn out 3,000 men each year it will take more than 40 years to build up such a personnel and by that time the replacement rate would be 4,000 men annually."

Last year there were 7,010 undergraduates in the forestry schools of the United States. The highest previous enrollment was 6,067 undergraduates. But if freshman classes do not diminish we will have in 1949 close to 13,000 forestry students in our schools, and an annual graduating class of approximately 2,400.

Dr. Shirley points to the possible expansion in undeveloped fields and the fact that we have a long way to go before the United States approaches the degree of intensity of forest management that now exists throughout western Europe.

THE WOODPECKER
Wins His Degree As A
USEFUL SURGEON



by

JAS. L. BAILLIE Jr.

Pileated woodpecker feeding its young, an Algonquin Park scene. Photo: Dalton Muir.

THE Pileated Woodpecker, largest of Canadian woodpeckers, thanks to protective measures and the realization by the shooting fraternity that it is a useful resident and lends atmosphere to the Canadian woodlands, is making a spectacular come-back in many parts of the country.

An example comes from the Toronto region, where these birds were virtually absent from 1894 to 1932. At the present time they occupy wood-lots here and there throughout the region, a census taken in one township alone in 1937 indicating a resident population of six pairs.

Widely known as the "Log-cock" or "Cock of the Woods" (in the south as "Lord God"), the crow-sized Pileated Woodpecker has an extensive range, nesting from Florida, Texas and California north almost if not quite to the limit of tree-growth.

Contrary to popular belief, it is not destructive to our forests. It is, as a matter of fact, one of the most inveterate enemies of the big Carpenter Ants which infest our trees. One stomach examination revealed the presence of more than 2,000 ants Grubs and wood-boring beetles constitute other items in their diet, and long observation convinces one that the Pileated Woodpecker does not commonly attack trees until the insects have already taken possession. One writer sums up the good services it performs by likening it to the usefulness of a surgeon in removing parts from the human body.

For economic reasons alone, since all the work it does in the forest helps to conserve the timber, this handsome bird richly deserves whatever encouragement we may be able to provide.

* * *

OUR INFLUX OF GREAT GRAY OWLS

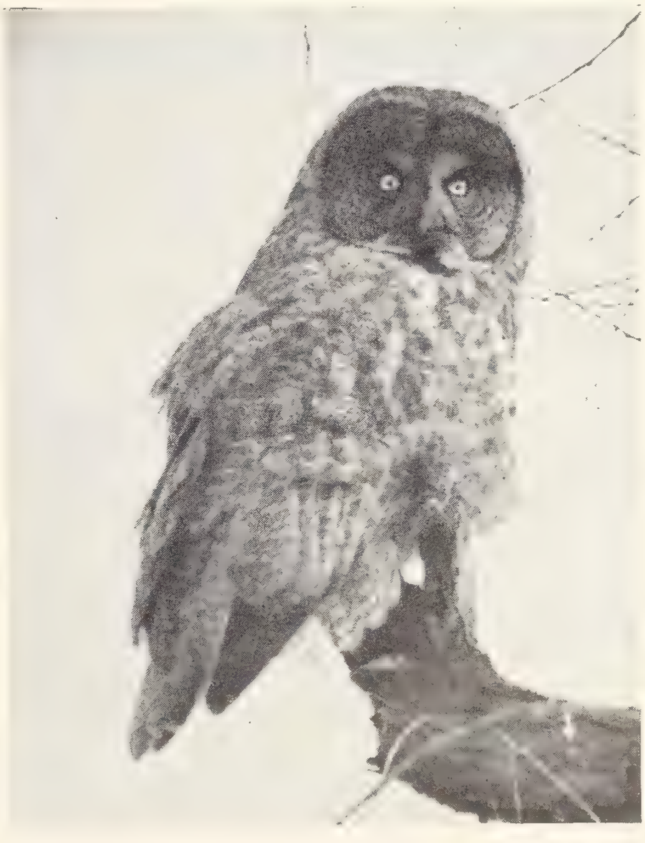
During the past winter, eastern Canada was visited by numbers of Great Gray Owls from the north-west, the largest owls in all the world, with a wingspread exceeding five feet.

Breeding in the west, from the Sierra Nevada Mountains of California, through Idaho, Montana and central Alberta to Alaska, the Mackenzie River and the Yukon, these great birds seldom come into direct contact with man. Occasionally, it seems, odd pairs take up summer residence far to the east of their accustomed range (northern Minnesota, Port Arthur, Michipicoten, North Bay, and even Gaspe and Newfoundland) but these instances may be considered unusual.

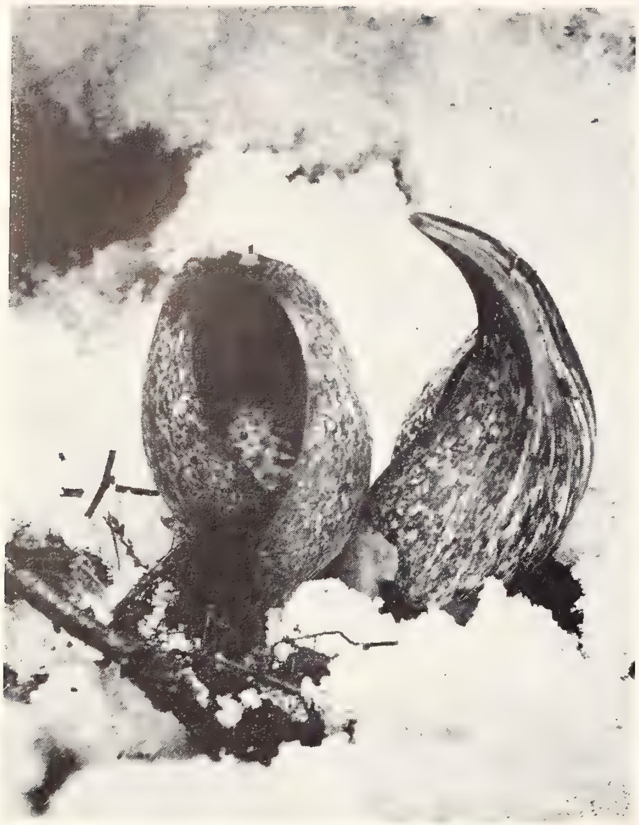
In the winter of 1889-90, there was a great eastward movement of these owls One Barrie taxidermist received 26 specimens to mount and another in Toronto received 23. Every few years after that, others come east for the winter and these flights continued until 1910-11, when they apparently ceased.

That thoughtless hunters were at least partly resonsible for this condition may be assumed from the "warm" reception they gave these owls in 1889-90.

There was a record of a single individual living on



A Great Gray Owl at Toronto Island. Photo: W. H. Carrick.



Skunk cabbages — harbingers of early Spring.
Photo: H. M. Halliday.

rats and Black Squirrels at a dump in east Toronto in January, 1935, but nothing else was heard of Great Gray Owls in that area between 1911 and the past winter. During the past season, one was shot in New Brunswick, another in Parry Sound, and at least three were seen in the neighbourhood of Toronto. Two of the latter frequented Toronto Island, where they were the cause of much excitement among local naturalists and photographers, many of whom were obtaining their first views of these massive birds. Mr. T. M. Shortt, of the Royal Ontario Museum of Zoology, was the first to discover the Island pair (January 12th) and the splendid photograph accompanying this article was obtained by Mr. William Carrick there on February 1st.

The knowledge that these owls, which are close relatives of the big Lapp Owls of Finland, Lapland and northern Russia, feed largely upon mice and other small mammals, and that they are added attractions to an already picturesque Canadian landscape causes conservationists to wonder if further slaughter by man will not relegate the Great Gray Owl to the ranks of the Passenger Pigeon and the Great Auk, earlier examples of man's folly in his dealings with nature.

Man's treatment of wildlife, has been, in fact, a grim story — one in which we can take little pride unless we take steps to preserve for posterity at least some of the glorious wildlife heritage which is Canada's.

The Great Gray Owl appears to be on the decline, and the regrettable part of it all is that we seem to know less about the bird than we do about any of the 14 other smaller and perhaps less spectacular owls which make Canada their home.

HARBINGERS OF SPRING

With the advent of March, naturalists look for signs of the awakening of nature about them. The tinkling songs of the Horned Larks from the fields, the honking of the Canada Geese as they move across the sky, and the first croaking of the Swamp Tree Frogs from the marshy places are typical signs of early spring in the southern parts of eastern Canada.

Another harbinger of early spring, which is "famed" for its objectionable, fetid odor — the Skunk Cabbage — has still another claim on our "affections". It is one of the first plants to flower in the swampy areas of the same section of eastern Canada.

Its shell-like spathe (which attains a height of six inches) pushes its way up through the snow and expands, in fact, during the early days of March and it is said that the juiceness and freshness of these green parts are relished by Bears and Groundhogs making their first forays for food after their long winter fast. Other authorities classify the plant as acrid and poisonous to humans, causing vomiting and temporary blindness, and claim that it is "avoided by animals".

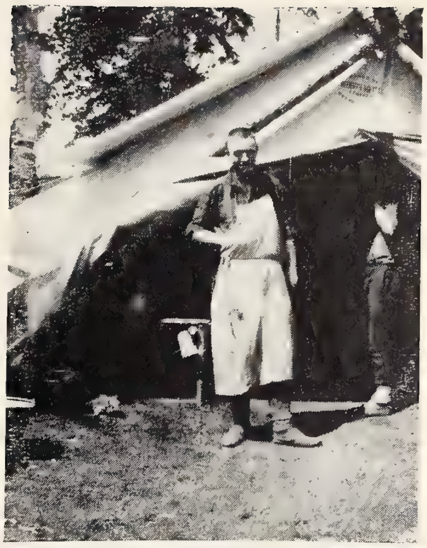
The flower-spike of the Skunk Cabbage is a fleshy, egg-like object, enclosed in the thick, purplish-mottled spathe and is reported to have an odor like raw onions. The cabbage-like leaves (which come later) are enormous and fan-like, often growing to two feet in length, and one foot in width. They account for the common name of the plant and it is at that advanced stage that Skunk Cabbages are objects of opprobrium.

Skunk Cabbages range from Georgia to southern Canada, west to Iowa and Minnesota, and are close relatives of the wild Calla and Jack-in-the Pulpit, other herbs familiar to the Canadian naturalist.

PAPER INDUSTRY DOLLARS REACH EVERYBODY

Pulp and paper is the largest individual industrial buyer of goods and services in Canada. In 1944, the industry's purchases exceeded $176 million and included $70.5 million for transportation, $21.6 million for fuel, $15.7 million for electricity, $34.6 million for chemicals and mill supplies, $6.6 million for fibres and fibre stock, and an estimated $8 million for food and fodder and $19 million for purchased pulpwood.

You have to be tough for a life like this.



A cook with a cruising gang is either good — or out.

No job for weaklings — A timber cruising group in camp.

* * *

by STAFFORD BENSON

* * *

Timber Cruising Is Never De Luxe

SOME years ago, in a small frontier town, a man walked down the only street of the 'metropolis.' About him there appeared an atmosphere of respect and romance. As I brushed past him a heavy fragrance of the woodlands permeated the air; he seemed a part of the wilderness, silent, dignified and austere. "Who is that?" I asked. "Oh, him!" was the reply. "He is the timber cruiser for the Lumber Company."

"He seems all man," I said.

"He is!" came the emphatic reply. "He's all man, for sure. That fellow can take a fistful of tea, a pinch of salt and a bit of flour and disappear into the bush for weeks!"

The impression lasted. Though my wanderings in the forest his vision frequently appeared before me as a shining example of what a true woodsman should be. In my young mind I visualized him by his solitary fires, crouched against the cold of the North wind. I saw him scudding across peaceful lakes in his canoe — in short he was an ideal.

The years marched past. Devious paths and winding trails found me at last a timber cruiser for a large lumber firm. I had learned the hard way, surveyor, trapper, trader and the long line of eventful occupations which fall within the scope of a wilderness dweller's life. But how different were the cruising methods from the days when my hero used to disappear into the forest with his scanty supply of provisions and emerge weeks later hard as nails and tough as rawhide.

The cruising I knew was conducted by well organized parties consisting at times of as many as thirty men. Base lines were run about three miles apart. At intervals, according to the minuteness of the cruise, stations were established with corresponding points on the paralleling line. Each morning every cruiser was given a pair of lines to run, usually side by side. To cover these it meant a day's travel of six miles through every kind of forest terrain known to man. With each cruiser was a compass-man whose duty it was to guide the cruiser by means of a hand compass so that at the end of the line he would contact the established station on the farthermost boundary of the cruise block. Competition was keen among the compass-men. At night, in camp, each would brag of his skill in running a line so exact that he hit the station at the far end of the line right on the nose. This was no idle boasting!

At determined intervals along the cruise lines detailed tallies were taken of all timber standing within a given radius. These were measured by the compass-men, their dimensions and species were recorded by the cruisers with general remarks concerning the terrain upon which they were located.

Day after day, come rain, shine, snow or sleet we travelled our lines swerving neither to right nor left, crashing through dense underbrush, scaling dizzy walls of solid rock, fording rivers and rafting lakes. Never did we deviate from the true bearing of the cruise line. Frequently on summer cruises when myriad pests drove us frantic, we built crazy rafts on which to navigate goodly lakes where we again picked up our pre-spotted landmark. By winter on bitter days our snowshoes sang a merry tune as we marched unceasingly through everything the forest cast before us.

Looking back, it is safe to say that about the only thing that I can recall which threw us into an offset was the presence of a stubborn bull moose in his glad days of Autumn.

It was a great yet hard life this cruising. It made men tough and healthy. We were a fair crowd comprised of men from many parts of the universe. We worked hard and lived hard. Dangers of a moment became incidents at which to laugh the next. Wild rapids strove in vain to twist our canoes into grotesque resemblances of what they really were. The winds of winter roaring off the large lakes, buffeting our canvas camps failed in their attemps to chase us out of their domain.

We ate well and our cooks lasted only a short time if they did not measure up to the exacting standard set by the hardy men of the forest. Men got sick. We pulled each other's teeth and rubbed the other fellow's back.

Outboard motors and long lines of towed canoes took care of our summer moves. Swinging and pitching in turbulent waves the frail canoes twisted and tossed in a manner which would scare the wits out of any who cared what became of themselves; in those days we didn't!

The winter move was a less easy task. Each man was given a sled. Upon this conveyance were transported the man's personal gear plus a goodly portion of the general camp equipment. It wasn't easy at times persuading a well laden sled to follow up a sharp hill. Moccasined feet slipped and breath came in short pants. Many a loaded sled was coaxed up a steep hill on curses alone. No matter how hard the day with its physical grind there always loomed ahead the cosy night around red-hot tin stoves with men of kindred spirits.

In winter beards grew in abundance — back, blond and red. Icicles hung upon these masses of human foliage, tobacco turned them yellow and matches singed them into irregular shapes but still they were the pride and joy of their wearers. Bets ran high as to who would have the longest and thickest by breakup. Men got hurt and were nursed tenderly by the hardy souls with whom they shared the tent. Feet were split by axes, ears, fingers and noses were frozen solid. There were days when men rolled in their blankets, complaining patients of their pals only to change places a few days later.

The Heron Takes Whatever the Menu Offers

by W. J. BANKS

OUTDOORS lovers in most of North America know and respect the great blue heron, who rules the ripples of the shallow shore waters in ponds, rivers and lakes. The common nesting range extends from Nova Scotia to South Carolina and from British Columbia to Nebraska, but herons have been seen as far north as the Goose Bay Airport in Labrador. In winter they occur southward from New England. Many reach a weight of eight pounds and wingspreads of six feet have been measured. Average length is 46 inches.

The Great Blue Heron, king of wading birds.

Here, by a quiet northland lake, we see "King" Heron in typical pose and surroundings. When following his favorite pastime, fishing, he stands motionless until the unwary victim swims into shallow water close by. Or he may stalk carefully until he sights his prey, at which moment the head darts rapidly forward and downward. Stabbed and disabled if large or tossed upward and swallowed head first if small, the fish soon disappears. Frogs, snakes, grasshoppers, lizards and even gophers, mice and young muskrats also find their way into the great blue heron's capacious stomach upon occasion, travelling via a long, strong beak and even longer gullet. Food for the young is regurgitated.

Until quite recently it was widely believed that the big blue heron could not, or would not, alight and swim on deep water. Now, however, observers have shown this to be a fallacy. The new viewpoint is confirmed by Dr. L. L. Snyder, curator of the Royal Ontario Museum, who watched a big blue heron alight 200 yards offshore in Lake Erie. Its appearance and behavior, he declared, were "gull-like; the wings were carefully folded, and the set of its head and neck suggested the bird was floating, not standing." Soundings proved this. The heron then took off without difficulty and settled again on deep water.

VALUED AT RECORD $90,000,000

THE products of New Brunswick's forests and mines in 1946 were valued at a record $90,000,000, Lands and Mines Minister R. J. Gill has revealed.

Forest products contributed approximately $83,000,000 to this figure, and mineral products $4,000,000. The remaining $3,000,000 was the valuation placed on fur taken by trapping, food value of game and fish taken by angling and expenditures by non-resident hunters and anglers.

The province's pulp and paper mills operating at about 95 per cent of their total capacity, produced materials which made up $43,000,000 of the $83,000,000 forest product valuation. Products of sawmills and woodworking were valued at $19,000,000, the production of pulpwood, pitprops, ties, poles, etc. at $14,000,000 while firewood valuation was placed at $7,000,000. The pulp and paper companies used 800,000 cords of pulpwood. Forest products cut from Crown Lands totalled 466,000 cords for products measured by stacked or cord measure and 82,000,000 feet for products measured in board feet.

New Brunswick's territorial revenue last year, $1,711,353.11, was the largest on record.

You're Safe on Water — Sometimes!

by DONALD T. ROSE
Director of Swimming and Water Safety
Canadian Red Cross Society
Quebec Provincial Division

EVERY fishing and hunting season newspapers publish a constant procession of water tragedies. "Angler drowns" — "Two missing as boat capsizes" — "Hunter loses two-hour battle with rough water" — are headlines as familiar, very nearly, as the daily weather report.

"Water Safety? Why I've fished lakes and rivers of Canada every year of my life since I was a boy. I've never drowned yet!"

Nobody ever drowned twice. You can't profit by the experience. Sportsmen who brave storms and rough water, risk their lives in makeshift boats, venture far from shore and miles from help without adequate knowledge of water safety are asking for trouble. Luck is a slender prop. In the water alone it deserts an average of one thousand Canadians yearly. Of those 1,000 drownings per year it would be generous to estimate that over half this number represent victims of preventable accidents, persons who died needlessly by taking risks unprepared.

Every man who is interested in a sport which takes him on or near the water should learn respect for it. He should be able to swim. He should be able to handle a boat. But these alone are not enough.

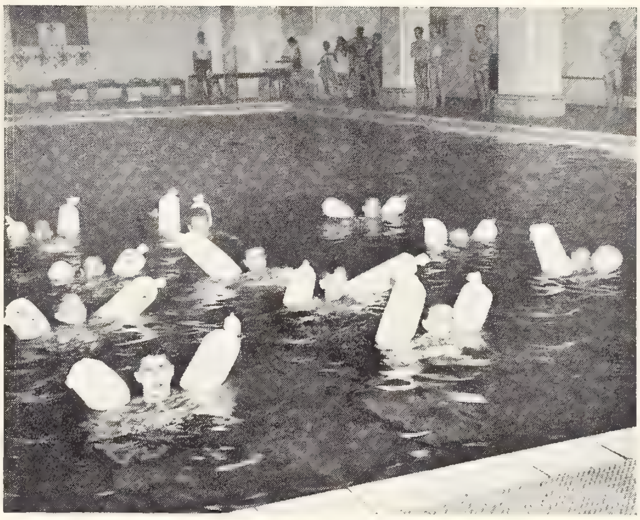
Two water tragedies of recent years involved notable Canadian sportsmen. They could swim. They could paddle. They were men of long experience. One was the secretary of a Quebec fishing club. He and his friend, seated bow and stern, had drawn their canoe alongside a floating log to cast for a while before sundown. Suddenly the secretary slumped over the gunwhale. He had taken a heart attack. His weight tilted the canoe so that his head hung in the water. Not trusting his ability to handle both the unconscious man and himself in deep water, the friend clung to the log, holding the canoe steady, and shouted for help. When help arrived it was too late. The secretary had drowned.

The second accident took the life of one of Canada's champion bait and fly casters. He was drowned when his canoe capsized while fishing in heavy hunting boots and heavy clothing. He could swim well but his boots dragged him down.

These two cases, although typical of many, are significant in that they concerned men who were skilled in the art of angling and after years of experience excelled in every feature of the sport. Yet in both cases simple, familiar hazards brought their end. They both knew water. They both knew boats. In the first instance the victim could not have saved himself. In the second, who is to say? However it is safe to suppose that had the companion in the first example possessed a sound and thorough knowledge of water safety his friend might have been alive today. Again in the second, if the victim himself had been schooled in every phase of water conduct, he would have known how to escape his hampering clothing and turned their hindrance to help.

Know how to swim, certainly, but know too, how to provide for emergencies. Know how to disrobe and untangle yourself from restricting clothes in the water. Hip boots are particularly dangerous. They should fit loosely, ready to be kicked free in an instant, and should never, in a boat, be buckled to the trouser belt-loops. Purchase leather jackets and ammunition vests with an eye to hasty doffing. Practise these water manoeuvers occasionally. Skill may mean the difference between life and death — yours.

A Red Cross instructor shows how a bag may be filled with air for use as a life-buoy.



Here a class in Red Cross swimming and water safety demonstrates the use of inflated cotton trousers as 'water wings', a useful safety device — if you know how.

Know about boats, how to select a craft, how to manage it. For fishing choose a sturdy flat-bottomed rowboat with good oars. The Swimming and Water manual of the Canadian Red Cross Society offers valuable information to sportsmen anxious to remain alive. When fishing, never crowd the side of the boat. In the excitement of the strike, while the man with the fishing line stands, his partner should balance the boat with a hand on each gunwale. Be sure when netting a fish not to lean too far out, and in winning a prize catch keep calm for the sake of the fish and yourself. Be careful not to overload a boat and, unless absolutely necessary, partners should not change places while afloat.

If you are fishing in a lake where squalls arise, hug the shoreline. The prize muskalunge is no good to a dead man. If caught in a squall centre yourself squarely over the boat's keel.

In the event of upset, it's a good idea to bear in mind that rule of the road — "Never leave the scene of an accident." Cling to the swamped craft until help arrives. Never try to swim to shore unless the distance is very short, the water warm and you are a better-than-average swimmer in top condition. The boat, contrary to popular opinion, will not sink.

With a thorough knowledge of water safety you can safeguard the lives of others as well as your own life. To assist a companion struggling in the water the Red Cross suggests that fishing poles be used as reaching aids. Do not use shotguns or rifles this way unless positively ascertaining that they are unloaded, both magazine and barrel. Common clothing make excellent life-saving devices. A pair of cotton trousers, for example, will serve as water-wings with each pant-leg knotted and the whole inflated. The inflation is simple. Toss the trousers overhead, backwards-forwards, like a skipping rope so that the air funnels into them, or blow into the top of the trousers from under the surface. Dunnage bags will serve the same way. A cotton shirt will keep you afloat if inflated with air (by blowing from the collar), tucked securely into the trousers and held closed at the neck. Wool, however, will not serve.

Those swimming and water safety lessons are free, by the way, — free and available to all sportsmen of intelligent thought and foresight. Last year more than 16,000 Canadians of all ages, took advantage of Red Cross lessons in swimming and water safety. It's safer to know how than to wish you did.

Fire Insurance On Scandinavia's Woodlands

by **ROBSON BLACK**

THE Swedish insurance company that handles virtually all of the risks on forest lands within the national domain carries policies on 160,000 forest owners out of a total of 250,000 in that category. Most of these are farmers, for the fire hazard is so slight that the big companies in forest industry don't bother with it. Around 25 million acres are insured at an average premium charge of a little under two cents an acre, and the values insured may go as high as $224 an acre. The total premium income is $450,000 and the average damage by fire applies to about 12,000 acres a year. The latter to a substantial degree is young plantation growth which is a first concern of the insurer and carries the highest annual premium and of course is most subject to fire damage.

In Sweden's lakeland

It looks a very happy situation from the insuring company's standpoint to have a premium income of $450,000 a year and a loss record that may be as low as $30,000. The story must have another chapter and this is it: The company is an active partner in forest fire prevention and built 55 lookout towers of a modern type and in addition makes an annual contribution of $60,000 to the safeguarding of the forest areas. The fire insurance premiums on woodlands are a sort of revolving fund in the sense that they not only pay for losses (for both soil values and tree growth) but set up precautionary measures against any fires getting under way.

In Norway, the woodland insurance scheme follows a similar general pattern. Seventy percent of the forest owners are insured. On the average, a Norwegian fire policy will cover a loss of $24 an acre which again applies to soil values and growth. There is a distinctive Norwegian scheme whereby, for example, a farmer insures 25 acres of his holdings for a total coverage of $600. He pays a premium of around two cents an acre annually for 22 years and at the end of that time he is handed a paid-up policy on the area for its life. Naturally, by that time his hazardous area of newly made plantations has passed into a smaller risk class. In all cases of fire loss, the policy-holder cannot put the proceeds into his pocket and sit idly by. He must invest, by law, 20% of his insurance payment in the reforesting of his area.

In Norway, as in the rest of Scandinavia, the annual fire loss is meagre, just 1,600 acreas a year between 1900 and 1935 with higher damage in the next ten years, half of them within the chaotic period of the German occupation.

Canadians have good reason to be astonished at their first sight of fire prevention set-ups in the countries I have mentioned. Our Canadian warehouses packed with a king's ransom in pumps and hose and trucks and tools have no counterpart over there. And for the simple and valid reason that when a people installs the latest type of fire prevention mentality in their own intelligence and in their sense of shrewdness, they don't need many feet of hose to keep their forests evergreen and everlasting.

Topsy-Turvy Forest Taxation

by JOHN D. GILMOUR, B. Sc. A; B. Sc. F.

(Concluded from February Issue)

A yield tax has been proposed as a good form of forest taxation. Although this was proposed by Fairchild after exhaustive study, and hence was recommended by the Sloan Commission on Forestry in British Columbia, it is not good forest taxation. Fairchild's error is based on the mis-conception that the production of a forest acre is a quantity which for that acre is more or less closely fixed. Foresters know, and it has been proven many times in practise, that production can be greatly increased by interim cuttings and thinnings; and that pruning will produce clear lumber in a much shorter time than if the stand is left entirely to Nature.

An owner will do such operations sooner if he knows that he will receive all the benefit from them. The farmer and the rancher similarly increase their production by intensive cultivation, selection and breeding of the best stock, fertilizers, drainage. good seed, etc. and it is in the best interests of the country that they should do so. What is most needed is production, the best use of land, whether it be farm, or range, or forest.

Forest land, as soon as the first crop has been logged, should be devoted to tree-production. Thereafter it should be assessed and taxed annually on the assessed value, at the same rate as farmland. The assessed value should be based on productivity and accessibility, which is what actually happens on farms, or even in the case of city lots.

The annual tax should be deferrable, at the option of the owner, but on such deferred taxes there should be accrued and compounded annually the prevailing Government rate of interest.

Deferred taxes and accrued interest should not be allowed to exceed some reasonable percentage of the value of the land and the crop on it. This might be 25%.

If the crop is lost through fire or other cause, a refund should be made of taxes and fire-protection costs for the years of age the crop had reached at time of loss. The owner would still be losing in several ways, such as interest on his land-value, administrative costs, and more especially in the burden placed on him of starting a new crop. The green forest will renew itself, but if planting is required the cost of planting will be more than the land-value. In the case of a serious loss, his plan of continuous operation would be upset, and production of raw material for his plant might be reduced over many years.

The business of forestry is a highly technical one, requires long-term planning, and the continuous follow-through of the plan for a long period. It is not one which can be managed under the political systems which we know as democracies. — "Everybody's business is nobody's business." Governments change too often, and budgets are made for only one year at a time. A long-term plan made by a far-seeing Government is not assured of continuance by a succeeding Government. In depressions moneys for such essentials as fire-protection may be withheld entirely by the Government of the day. This happened for two successive years in the 1930's in British Columbia. In those years no money whatever was voted for protection, although British Columbia owns over 90% of all the timber in the Province, and in those two years collected over $4,000,000 in forest revenue. The contribution held up would have been $1,000.000 total for the two years.

Forest fires occur in any year, depression or no. Trying to prevent them, and fighting them if they occur, cannot be postponed until a more convenient season.

After many years of such management, or mismanagement, it should not be difficult to place the responsibility for our present forest condition.

The forests will be most productive when the maximum interest is taken in them by the greatest possible number of owners. Forest properties may be of any size, a 10-acre wood-lot can be a valuable part of a farm. Ownerships would settle down very quickly into the most effective sizes for management, provided a proper tenure and system of taxation were applied to forest land.

It is not contemplated that in the case of forest land Government should lose control of the management. Forests are too valuable to the people.

General oversight of how the forests were being protected and managed, should be maintained by the Government. If Government foresters were free to do this sort of work, to conduct research, and to give advice such as is freely given in the case of agriculture, there would soon be increased production of wood material. It is this production Canada needs, not the revenue from a basic raw material.

This idea of Government control has not yet been generally applied to farms, but in modern thinking one can see the justice of it, and accept the principle as one which involves only the duties of a good citizen. The use of land affects not alone the owner, but his neighbors, and all the citizens of his country.

For too long a time in the case of forest land the occupier, the one who could do the most for it, has had the least continuous interest in it. The primary object of Government has been to get the maximum revenue, not only from the profits, but from his raw material. The system of taxation has been one of exploitation, rather than the encouragement of continuous forest production.

It is a system which has failed in Canada over a long period.

One way out, regardless of what Governments do, would be for a few public-spirited citizens to set up permanent areas on which they practised the most intensive forestry methods, which would be economically possible if there were no taxes. Detailed costs and records of production would require to be kept. In the course of 20, 30 or 40 years actual proof would be forthcoming of the potentialities for growth. Foresters know all this today, and such a course would mean therefore only the loss of another generation's time. Such public benefactors would under present conditions be heavily mulcted in taxation, although they would prove a point which is not known apparently by legislators who control the forest industries.

In the light of present knowledge no such desperate and time-wasting measures are necessary.

Statistics showing Canada's 760,000 square miles of productive timberland convey very little to the general public. They are like the figures for the National debt, or for proposed Government expenditures, the figures are too large to grasp. A few zeros more or less mean little to most readers.

(Continued on page 84)

"The Climb from Mud Shack Standards"

(*Concluded from page 69*)

per annum, represents the minimum of construction timber and lumber that may reasonably be required for the well-being of human society under normal conditions of peace. It will not do for the post-war reconstruction period. This amount must be increased, for fuel and other purposes, to about 60 cubic feet. It must be kept in mind that this figure of 60 cubic feet may well increase with new discoveries and technological treatment of wood to supply wood pulp and for many new purposes including substitutes for certain metals.

On this basis the requirements of wood products, including wood pulp, for the world population of two billion souls, would work out to an annual crop of 120 billion cubic feet. Such an enormous figure gives us some idea of the needs of mankind in a new world of reasonable well-being. The present consumption of about 52.5 billion cubic feet is less than half this computed requirement of the world's population.

The area required to grow the vast annual crop of wood will be about 4.8 billion acres, or 2.4 acres per capita on the average for the world population of 2 billion souls. The area possible of cultivation in economic farming enterprises is 4 billion acres, or 2 acres per capita of the present world population. Land in managed forests would need to be greater by 20 to 30 per cent than land in cultivated crops. But this would not be enough. Timber must be grown on areas economically accessible to its places of consumption.

The Punjab Speaks to Canada

TO enlarge an area of farm lands by borrowing from forested slopes and discover finally that the population is worse off in food supplies than before, is a phenomenon common alike to Canada and much older civilizations.

In a review of 'Erosion in the Punjab, Its Cause and Cure' by Sir Harold Glover, Dr. Walter Lowdermilk draws attention to the fact that the enlarging demands of a growing population in the Punjab have brought vast areas of new lands under cultivation, but at such a tragic cost as to nullify the whole purpose of agricultural development.

During the past twenty years, the population of the Punjab has increased by nearly 40 percent. In 1941, the census gave a total of 28 ½ million people of whom 85 percent lived on farms covering 50,000 square miles. Only 5,500 square miles are at present under forest.

In the course of centuries, the northwestern lands were cleared of forests and cultivated, until today there is little or no land left for cultivation. As forests were cleared from hill slopes, erosion was accelerated, removing soil and underlying material. Farmers attempted to hold it in place by terracing and embanking their fields, but dams were broken and great gullies were cut. Unrestrained grazing in the forest areas killed off the tree cover and together with cultivation of the steep slopes induced erosion on a tremendous scale. Such erosion cuts down through terraces near villages and damages the best village lands.Floods are sudden and violent and in the winter season water is scarce. Dams to impound waters are not practical, as the heavy loads of sand and silt would fill reservoirs in a short time.

A remedial plan has been undertaken by the Forest Department which will require heavy interference with long-established public habits.

The lesson to be drawn from the Punjab story should not be wasted upon Canadians prone to think that immutable laws of Nature suspend their logic in the North American jurisdiction.

The Punjab has more land under cultivation than ever before in its history and yet faces an agricultural catastrophe throughout its length and breadth. The causes and effects are as applicable to a Canadian as to an Indian province.

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20 Million Seedlings Soon Available in B.C.

by ARTHUR RIELLEY

CREWS of planters, working for the British Columbia government, are busy sowing a crop which will probably not be harvested for more than sixty years.

The seedlings are tiny Douglas firs which some day will grow into tall timber to be logged and processed into lumber, plywood and other forest products of tomorrow. The British Columbia forest service plans to plant about 3,500,000 trees during the coming spring on Vancouver Island, mostly near Horne Lake and Campbell River, where fire swept through hundreds of acres of timberland about eight years ago.

It had been expected to get a large scale planting program under way in 1945, but owing to the shortage of labor the task had to be postponed. The two-year seedlings which were to have been planted in 1945 have been carefully nurtured in government tree nurseries since then.

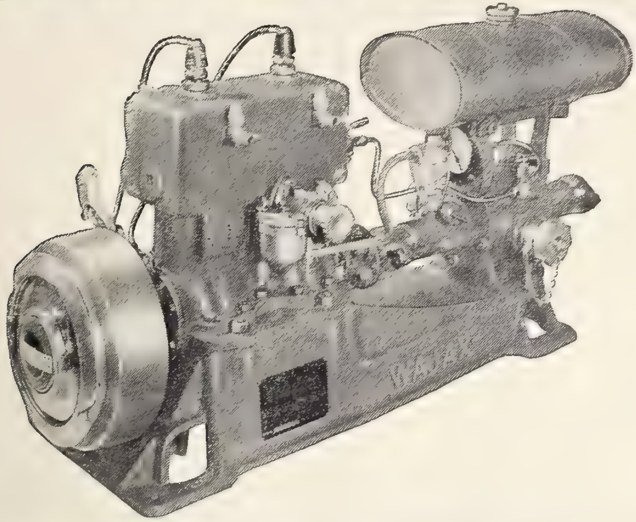
Some red cedar will be planted as well as Douglas fir. Cedar is used on the west coast for the manufacture of shingles as well as lumber. Hemlock, another important species in British Columbia, will not be planted because it already occurs intremendous volume over wide areas; in fact, its abundance will probably be responsible for hemlock's replacement of Douglas fir in many uses during the coming years.

In 1948 the provincial government hopes to be able to expand its tree planting program substantially and will have no less than 20,000,000 seedlings available for distribution among the various areas that have been marked for reforestation.

During the last few years British Columbia has larged far behind its schedule of tree planting because of the difficulty of getting sufficient manpower for the comparatively brief season during which the operation must be carried out. Foresters regard this program as one of first importance, however, and point out that if neglected it will lead to critical shortages of timber in the future.

The provincial government hopes to enlist the cooperation of private interests in this tree planting work. In several Northwest states private operators have made real progress in development of "tree farms", where areas have been stocked with seedlings that will become commercially valuable in 50 or more years. It is hoped that legislation may be passed designed to give British Columbia timber operators encouragement to undertake similar long-term programs.

FOREST FIRE FIGHTING EQUIPMENT



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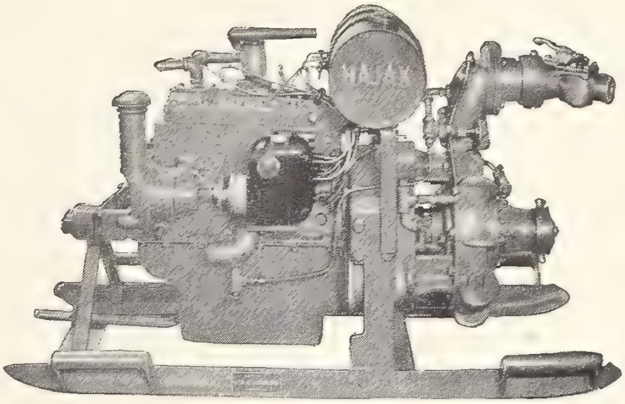

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Topsy-Turvy Forest Taxation *(Continued from page 81)*

It is necessary to bring this vast forest area under management for perpetual yield.

The first step required is to provide a permanent tenure and a fair system of taxation for the second and subsequent crops.

The next requisite is to break up this huge vague area into units of manageable size, and to attempt to get competent persons and corporations to undertake, by firm agreement, to manage these units for perpetual timber production.

There will continue to be large Government revenues from the old crop, until the last of it has been logged.

These revenues should first be devoted to forestry purposes, up to 100% of the revenue if needed. There may be areas, as in Saskatchewan and Manitoba where, in the interest of future employment and revenue, expenditure should exceed revenue, on the same principle as that of expenditures by most Government Departments. Until we reach this realization we have not started to think seriously about Forest Management. The money is required for protection, for the construction of access roads, for planting where needed, for research, and numerous other activities essential for maximum timber-production.

The planning and the execution of these programmes, which in Canada are Provincial responsibilities, should be entrusted to Forest Commissions in each forested Province. This was a major recommendation of the Sloan Royal Commission on Forestry in British Columbia.

The transition period from the exploitation of the first crop to the farming of the subsequent crops thus would readily be passed. Canada should consider itself to have done a very good job if revenue from the old crop replaces it with a new one. In some Provinces there will be surplus revenues left over for general purposes. If this were done, the result in all forest regions would be a timber asset of such great proportions that it would provide a very broad revenue base, so that no direct tax on the new crop would be required.

It is impossible for all this to be done without the help of private owners on a scale we have not yet envisaged.

Governments do not do the logging, and logging is the most important silvicultural step in forest management. Our failure to legislate so that the logger had responsibility, and permanent financial interest in the forest he operates, is at the root of most of Canada's forest troubles. There have been, and there are now, many competent and industrious foresters in Canada. However, it is too much to expect that a forester, placed in general charge of thousands of square miles of Government forests, can have the same intimate concern, as would a considerable number of owners who would see a chance to make a living if they managed their own area well. Forest management cannot be undertaken on a wholesale basis. It must be applied continuously, over units of workable size.

The family farm will always outstrip the collective farm.

For the Prairie Provinces — the 1947 Programme

The Canadian Forestry Association's Services to the Middle West

ALBERTA

PROGRAMMES will be held in Edmonton City schools opening on March 10th and running through until March 28th. Pictures and talks on forest protection and soil conservation will be conducted jointly by Forestry and Tree Planting Lecturers.

The Tree Planting Car will open its 1947 tour from Edmonton on Monday, April 14th. This tour will cover Canadian Pacific Lines via Camrose and Macklin to Saskatoon, and the Canadian National from Saskatoon via Scott and Wainright to Edmonton. Period to be spent by the Car in Alberta, approximately two months.

Forestry Tour opens at Medicine Hat with school showings, April 14th to 19th, proceeding to Lethbridge with school programmes from April 21st to 26th, following with MacLeod on April 28th to 30th.

General Forestry Tour opens in Southern Alberta on May 1st. This tour will continue throughout the forested areas of the Province until June 25th. From June 26th until July 18th it will cover engagements in the National Parks, with visits to Jasper, Banff, and Waterton Parks.

MANITOBA

Programmes in the schools of the City of Winnipeg from January 15th to March 15th.

The Tree Planting Car will open its annual tour of Manitoba in July, and during the season will devote two months to this educational work. An additional two weeks will be spent on special field work.

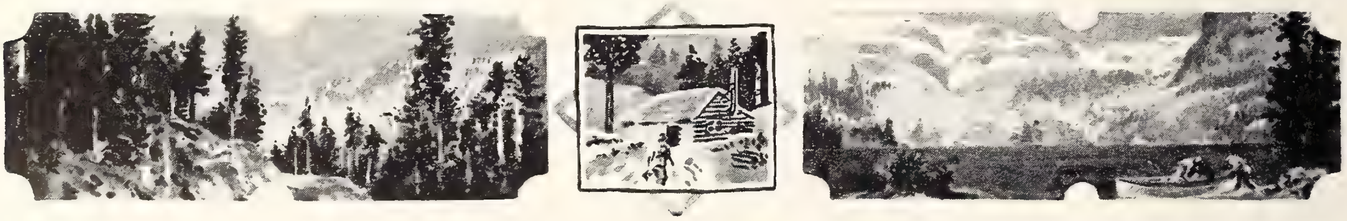
The Forest Protection Tour will open on Tuesday, July 22nd, with the first points to be visited lying in the Whiteshell Forest Reserve. This tour will cover a period of at least two months.

SASKATCHEWAN

Programmes in the City of Regina schools covering a period from January 13th to January 25th. The schools of Moose Jaw between January 27th and February 4th. In the city of Saskatoon programmes will be presented from February 10th to February 22nd, and in Prince Albert the schools will be visited between February 24th to March 4th.

The Forestry Tour will open in Saskatchewan on June 16th and will cover a period of about two and one-half months.

The Tree Planting Car will devote a period of four and one-half months to the parkland and open prairie regions.



The ideal combination for our prairie west. Homes and fields surrounded by windbreaks of living beauty. This scene is near Minnedosa, Manitoba. C.P.R. photo.

Victory Comes to Prairie Tree-Planting

by ALAN BEAVEN,
Manager, Western Division
Canadian Forestry Association

Second and concluding part of Mr. Beaven's article in February issue entitled: 'Ramparts of Trees for Every Prairie Farm'.

IT is recognized by soil experts that nothing ever devised by man can as effectively combat soil erosion as trees. This year in New Zealand a vast campaign is being undertaken by the Government against soil erosion; they are going to plant one million acres of trees on New Zealand farms. Trees bring to any farming area the twin blessings of moisture conservation and protection from winds. This is exactly what they did in the drought years. Wherever in the West trees grew wild, in sufficient numbers, complete failures did not occur. So marked was this in Saskatchewan that a common saying in the drought years was "crop follows the trees". This was the great contribution of the native poplar. Many of them died out in the bad years, but it was the older trees; the young growth left, with the hardy native shrubs, maintained the beneficial effect in conserving moisture and helping to break up the effect of heavy winds. In many areas examples of their benefits were striking. Fields that were well protected by native trees produced crop, when open fields but ten miles away were deserts of drifting soil. These were not exceptions but a general rule. Such lessons should teach us that these native trees have an important place in western agriculture, and that their help is essential in strengthening the entire pattern of agriculture to better withstand recurring periods of dry years. In those large areas where they grow successfully the native tree is one good answer to the problem of weak and worn out soils, no longer fit for farming. Clothed with trees they become safe, and also make their contribution in safeguarding better agricultural soils around.

A Victory for the Shelterbelt

These same benefits could be given to the open plain areas by the planting of trees as field shelters. This has been amply proven by nature's handling of the native tree. Over the southeastern part of Saskatchewan native trees have spread thickly during the past thirty years. Today such areas as those from Stoughton, eighty miles south and east of Regina, through Carlyle and down to Maryfield, across to Steelman and Frobisher, over to Gainsborough and Alameda, are heavy bluffland or parkland. In these areas at the time of settlement, it was impossible to find a switch large enough to drive cows, the yet native trees have spread over the years. This does not mean that farmers have given up their fields to trees. but that they have grown to recognize their value, and have allowed trees to grow on soils not fit for agriculture. As one old-timer, the late Mr. Reid of Steelman explained: "We are learning to farm with a few more curves, but with a much better chance of a good crop." He went on to tell us that when he settled his land not a tree or even a shrub grew on it, but that slowly as the years passed trees appeared in the low spots, the ridges and along roadways and fences. He encouraged them and soon they surrounded his fields. This he felt made the landscape more interesting and beautiful, but of greater importance they made his farming more profitable. He has not been alone in these experiences.

The great weakness of the open prairie lies in the fact

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IN
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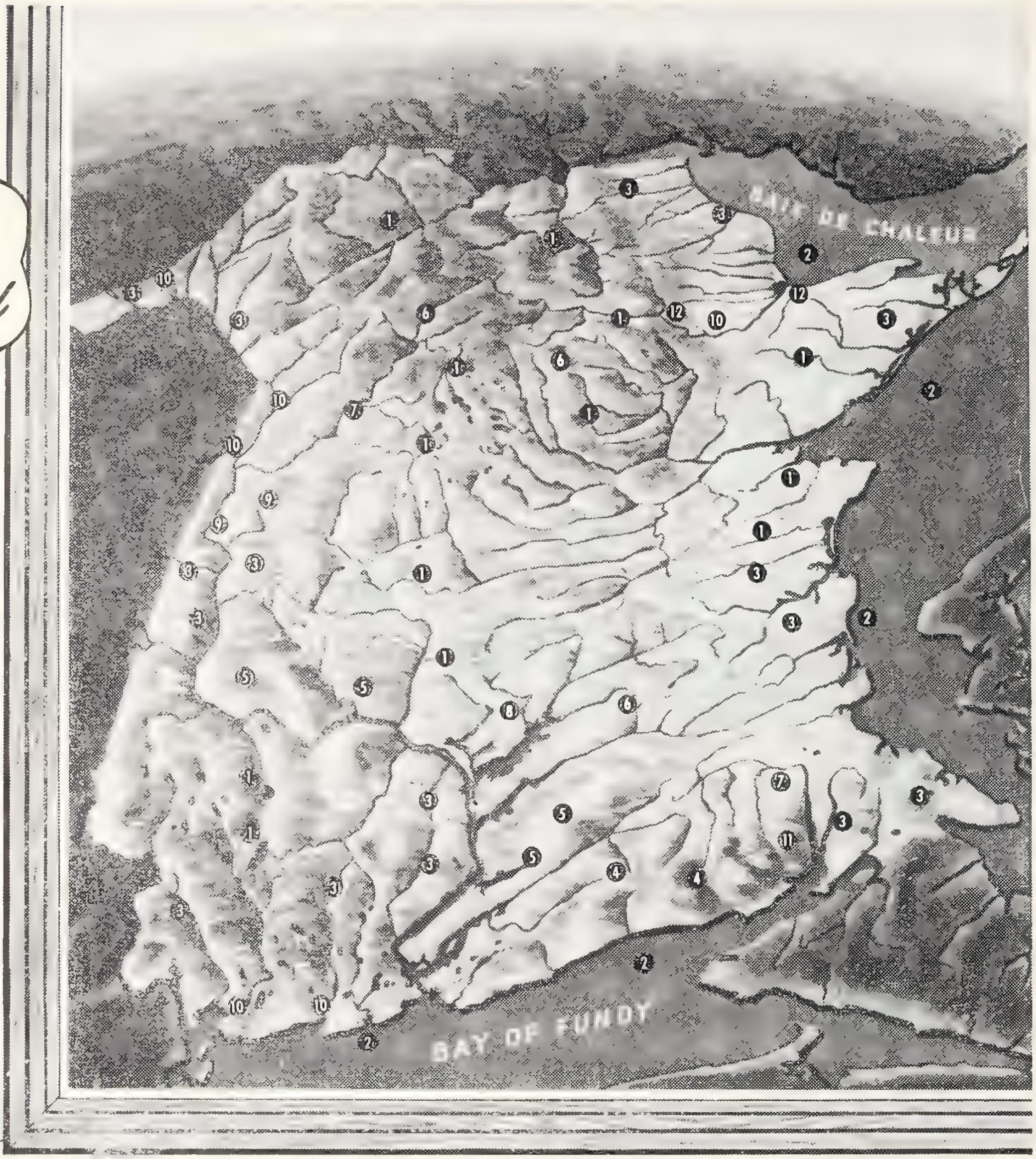
Map Legend...

1. Timber and Pulpwood
2. Fishing
3. Mixed farming
4. Dairy farming
5. Fruit farming
6. Big game
7. Gypsum
8. Coal
9. Potatoes
10. Water power
11. Manganese
12. Iron



One of a series of maps "New Horizons" copyright by O'Keefe's

New Brunswick

The thwack of the bushman's axe begins the flow of wood and wood products from New Brunswick's forests. This industry alone sets more than fifty million dollars to work within the province annually. New Brunswick's salt water fishing is worth more than eleven million dollars yearly. Agriculture is a near fifty-million-dollar industry. Iron products, vegetable products mean a further twenty-five million dollars to New Brunswick.

As well-trained youth uncovers new and wider uses for the rich material resources which form the heritage of all Canadians, Canada's stature will steadily rise among the nations of the world. We can look forward with confidence to a future of living standards without peer. Wise leadership can make to-morrow's Canada the world's richest land.

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that it stretches for miles with nothing to break the force of winds. In settling that great area west of Prince Albert, through Medstead, Spiritwood and over to Turtleford, farming people cleared off all the trees. Many of these people came from worn out southern soil, but seemed to have learned little from their experiences on the southern prairie. They came north with apparently but one main idea, to duplicate the huge open fields of the south as quickly as possible. The breaking plow and the match soon destroyed fine forests of spruce and all other tree growth, until for mile after mile not a tree was left. They built a physical south, vast open stretches of land. With winds as strong and rainfall no greater, they soon had reproduced a climatic south, wind erosion, drought, and crop failures.

These lessons can be put to good use in the work of tree planting. We could use trees to change the physical south into a land of protection from winds, and greater moisture conservation. Some farmers, all over the prairie, have belted fields, some even breaking up these protected fields into smaller areas by running hedges of caragana down the field. In some areas during the past few years farmers have banded together to belt much larger areas. These projects are under the help and guidance of the Forest Nursery Station at Indian Head. Such field shelters, which have been established have proved successful in protecting crops and increasing yields. We did not visit a protected field during the drought years that did not have some crop in it, even when unprotected fields around yielded nothing. In good years a field protected by trees will yield more than an open field. We hope that better methods of handling soil, the turning back of marginal areas to grass, and the use of new types of machinery may eliminate much of our present loss from soil erosion. Tree Planters know that trees can be used to make the open prairie safe. Field belting can save crops from disaster, and all their cost of planting and maintaining could be returned in making only one crop possible.

Every Home Needs Trees

But the greatest contribution of trees to the people of the prairie is a more personal association. Our parkland and bluffland areas give beauty to the landscape, make a home for insectivorous birds, provide recreation spots, and make possible the happy companionship of growing things of nature in our lives. Trees planted around the open prairie farm house make it a home, cool, beautiful and interesting. Their greatest recommendation lies in the fact that we have never met a farmer on the prairie, who having built up good belts of trees, would ever again live on the prairie without them. In the West lack of comfort in living conditions has been more of an oversight than a necessity. Over the years most of our farming people enjoyed a high measure of prosperity. They bought many of the hundred-and-thousand-dollar items, good machinery, cars, and more land, all of which are justified, but the tragedy has too often been that they forgot so many of the simple things that add so immeasurably to the pleasure of living. They forgot that growing children need beauty and interest around the farm home. They forgot the little conveniences in the home that lessen the heavy daily duties of the woman of the house. They neglected to paint, and often to repair, and with money available in many cases both land and buildings slowly went downhill. As one man of 86 expressed it, "Before they learned to find the most in life, most of life was done".

On many bleak prairie farms the parents found it hard to keep their young people at home. Places of greater

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interest pulled them away, and often a son left just when his father needed him the most. Trees often helped to solve this problem; as they grew, the farm became a place of interest and beauty. It attracted less fortunate neighbours, visitors were many, and the home a centre of interest. Inside many of these belts were picnic grounds, baseball diamonds, and even dugouts, which with a little work became "swimming holes". One man who had planted over 30,000 trees told us, "By building things of interest and beauty at home, we have made it unnecessary for our three boys to go away to find it. Often there are twenty or thirty young people here, and they all have a wonderful time." It is possible today to make any farm home as attractive and comfortable as a city home.

I have listened with interest to the stories of settlement days. How people arrived on the plains, often in the early spring, to take up their land. With all their humble possessions in a wagon, drawn by oxen, they left the land office and started the search for their future farm. They lived in a tent, with some shelter for the oxen. Many times the weather was bitterly cold, with fuel for heat almost non-existent. After plowing and seeding, many lost their first crops through frost, but they planted again the next spring. When a crop was harvested it often had to be delivered a distance of up to 30 miles, quite a trip with the slowest form of locomotion ever used by man, a team of plodding oxen. When delivered they may have secured thirty cents a bushel for it. To heat their first sod homes they often had to travel miles for every stick of wood. The country was lonely, neighbours were few and far between, and they encountered many difficulties.

The New Generation

The years immediately ahead are ones of promise for western agriculture. A younger generation is slowly taking over our western farms. These young people know that farm life can be made attractive. Thousands of them fought in the war, they travelled widely, saw how people lived in our cities, and on farms in other parts of Canada and in older lands. They are a machine age generation, familiar with most of what modern civilization can provide. Their farms will be electrified in the next few years, and their homes will be provided with many modern conveniences to make the work day easier for the woman of the house. They will want an invironment for their children equal to that enjoyed by young people in any part of Canada. They are going to be the tree planters of tomorrow; many are already the planters of today. Most of them starting on farms are determined to enjoy the benefits of trees right from the start of their farm life. They know that trees will succeed, and they are going to use them in making their homes attractive and comfortable. Their farms will be more self-sustaining. Under the able direction of Mr. George Spence, they have seen the worthwhile efforts of the P.F.R.A. in western farm improvement. They have seen the miracle of water, provided by this organization on hundreds of farms. On many of these farms the owner often hauled it in tank wagons, sometimes from ten miles away, year after year. They realize that with the will to do, the impossible often becomes a reality.

In the past few years, despite labour shortages, more trees have been planted each year than ever before. They are types of trees suitable for the West, and they will live and thrive. The Dominion Forestry Nursery Station opens the year with all available trees ordered for spring planting. The next few years may see them extending their nursery beds to meet requirements. Commercial tree nurseries are doing a large business. Tree Planting has taken its place as part of western farm life.

One of the most touching and beautiful stories of man's association with trees on the Prairies is that of a man who settled in Western Saskatchewan many years ago. He came from the eastern United States, had spent his early life in the forest and made a hobby of studying birds. He liked the prairie, but he missed the trees and particularly the birds. He knew that his life at his new home would never be complete until he had some trees around and could hear again the familiar call of birds he knew back east. And so on the open windswept plain he planted his first trees, the first ever planted in that district. Many neighbours told him they would not grow, but they did, and each year he added more. He built a little forest around his farm home and buildings. He added big groves of trees, and around the house shrubs and flowers. In but a few years he had developed a wonderland of beauty in the centre of one of the most open stretches of prairie. Then another miracle took place; many varieties of birds arrived to nest and spend the summer months. We often visited his lovely grounds and enjoyed an afternoon spent amongst his trees and gardens. The last time we met was in the late thirties. Our tree planting car was in his home town, and he came in to have a chat. His wife was with him, and we spent a pleasant hour together. It was in the early summer and it was with regret we knew that time did not allow us the opportunity of a visit to his farm, and we had to be content with his interesting accounts of how things were doing. He told us that all during the drought his birds had returned to him each year, flying over miles of wind-swept plains to their summer home. They were all back again that year, he knew each one as it arrived by its songs and mating calls. He told how the perfume from his lilacs had filled the evening air, and his enthusiasm for these living and growing things was exhilarating. All too soon he left, and it was not until that evening, that we learned from a neighbour that he had been blind for over a year. Even the loss of his eyes could not take away his pleasure in hearing his birds, smelling the beauty of his flowers, and talking of those things his hands had made possible. These are truly the imperishable things of life. Values that cannot be bought or sold, nor lost, but which make our lives richer and fuller.

Dunned

TO BE "dunned" commemorates John Dun, the hard-boiled constable of Lincoln, who was notorious in the reign of Henry VII for his persistent and relentless methods of collecting debts.

Later failure to pay a debt might mean "going to clink." Clink was the name given to the old debtors' prison at Southwark, of which the cells remain to this day under Winchester wharf on Bankside, while a Clink Street is still to be found close by. — London Weekly Telegraph.

Something OR *Nothing*

Remember the story of the monkey who tried to withdraw a fistful of nuts through the narrow neck of a jar? Because he wasn't content with getting one luscious nut at a time, he ended up by getting nothing instead of something.

That story is worth remembering today. Greedy grabbing of goods still in short supply can have the same result—nothing instead of something. Inflated prices, like the inflated paw of the monkey, can as surely prevent each of us from getting his fair share of available goods.

Canadians have had the wisdom to be content with a moderate "something," knowing that as production increases that "something" will grow larger and larger. This is good sense, and is founded on the principle that MODERATION is the key to CONTINUED ENJOYMENT, a principle to which the House of Seagram has always subscribed.

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How to Care for Hunting Knives

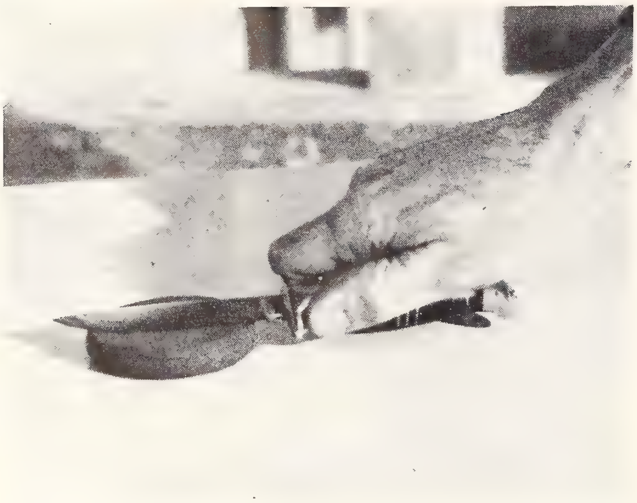

Figure 1

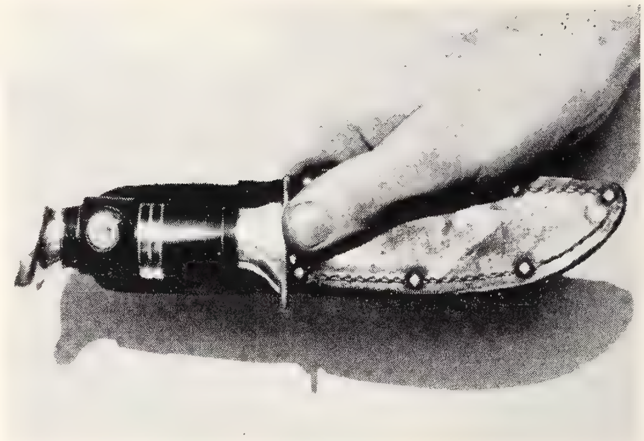

Figure 2

by PAUL W. H. G. JOHNSON

A HUNTING knife is a piece of equipment that always should be kept in perfect condition. Improper treatment loosens the handle and if the blade is not sharpened correctly, it loses its efficiency.

When sharpening a hunting knife, always hold the blade flat against the sharpening stone, as shown in Figure 1, so that the entire side is taken down evenly. Don't be tempted to raise the back of the knife to sharpen the edge more quickly or the blade will become thick. A blade that has developed a thick shoulder just behind its edge is useless. The time spent sharpening your knife properly will be saved many times when using it. Sharpen the knife on a good fine-grained oil stone and rotate the blade in a circular fashion for the best results. If the blade is rotated it keeps its shape better and more easily sharpened, because this prevents a feather edge from developing.

The popular type of hunting knife, with an ornamental handle of various colored composition rings, usually has a leather ring or two in the handle which act as a cushion to keep the remainder snug. If the leather ring dries out excessively, the handle may become loose. To avoid this, simply rub a little leather oil or dressing on the handle occasionally. Solid type handles keep tight if not abused, but sometimes a person is tempted to throw the knife into some hard object. The manufacturer never intended a hunting knife to be subjected to such treatment.

To prevent the blade from rusting, keep the knife sheath well oiled and when the knife is put away for any long period, give the blade a good protective coating of oil.

Sometimes the stitching of a sheath becomes accidentally cut when drawing out a hunting knife. To prevent this, just put a few soft copper rivets in line with the stitching. (Fig. 2). If the blade touches these it will not be damaged, because they are so much softer than steel. But don't use copper-coated steel rivets, which are often sold as copper rivets.

It is a bad habit to stick your knife into a tree as a temporary knife holder, because the tannin in some barks attacks steel quickly. The early inks were made by dissolving iron or steel in tannin, so when you have been using your knife to cut bark-covered wood, always wipe it well. Unlike bark, the tan in the leather sheath will not attack the blade, because it has been neutralized in the process of tanning the leather.

By following these suggestions, you always will have an efficient knife that you will be proud of.

'Approach to Summer' — A camera study by J. D. U. Ward.

WHEN THE FOREST GOES TO MARKET

In the war years, Canadian exports of pulp almost tripled. These export pulp markets are worth more than $100 million annually to Canada. Paper exports are worth another $175 million. Every Canadian has an interest in the maintenance of these markets.

WOLF HUNTING — Lake Of Woods Style

(COURTESY: NORWESTERN ONTARIO SPORTSMAN)

IF anyone wants a real thrill let him try wolf hunting from a car on a northern lake. Imagine speeding along at forty or more miles per hour trying to get a bead on a hundred-odd pounds of fur and muscles that's dashing for shelter among the islands !

That's what Clayton Bu'mer, of Kenora, thinks after he and two of his friends, Eric Lindstrom and Jack McCoomb, bagged seven timber wolves last December, with two of the largest weighing over one hundred and trenty pounds each.

"No doubt you have listened to the hounds on a drive. Perhaps you have strained your old smoke pipe on a long shot. You may even have tied into a muskie as long as a birch pole. You may think all these are thrills, but, brother, you have still a big one coming until you go on a wolf hunt de luxe on the Lake of the Woods."

For a number of years a few hunters from Kenora and the vicinity have hunted wolves from a car, Mr Bulmer continues. This is usually done about the turn of the year when the ice is sound and the snow is not too deep to impede lake travel. By the end of January pressure ridges or cracks develop and excessive snow makes the going practically impossible.

"Occasionally, the car wades through a small drift which slows you down considerably. Then you hit a small pressure ridge four to six inches high, covered with snow, which gives you quite a jolt. Everyone, of course, gives the driver advice as to speed, direction and so on, even though he is driving his own car.

"It is customary to have two to four passengers per car, loaded to the gills with rifles and shotguns. An old twelve-gauge pumpgun loaded with buckshot has proven most effective for us. We drive leisurely (25 miles per hour) around the islands, everyone straining to spot the slightest movement on the vast white surface of the frozen lakes — a dark object or a small snow cloud, that 'tell-tale sign' of an animal in flight

"Usually, quite a number of deer are seen passing from one island to another. Then, of course, there is the usual argument as to age, weight and sex; these are passed up for richer game, Mr. Wolf.

"When a wolf a wolf is first sighted, he most likely has already seen or heard you and is in full flight. 'There he goes,' is the chorus. Driver pours on the fuel, car windows are screwed down, guns whistle out of every available opening. By now we're doing fifty. Someone yells, 'Put here in high !' Instructions fly thick and fast, forgotten are the drifts and cracks. Passengers really get a shaking, but no one seems to complain. 'Step on it — Step on it !'

"Meanwhile, Mr. Timber Wolf is really stretching himself. His top

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speed is judged at forty to forty-five m.p.h. for the first mile, then he will settle down to about thirty — and he can stay with it when once started.

"A characteristic of the wolf is that when reaches an island he will go directly through it and off the farther side with renewed speed. On overtaking your quarry the driver endeavors to keep to the left of the wolf, a distance of approximately twenty yards. Now this puts the onus on the shooters.

"Imagine, if you can, driving across a ploughed field forty miles an hour and trying to get a bead on a mad dog with your old skatter-gun. It's easy ? Just try it !"

It was Sunday, Dec. 29, 1946, when Mr. Bulmer and his friends felt the urge for their drive on the lake. Guns were taken as ballast. One Winchester pump, 12 gauge, and one 270 Winchester rifle. Driving leisurely in second gear on account of snow and frozen drifts, this party was about fifteen miles south of Kenora. One of the party saw a wolf about a mile away in full light. "Step on it," was the first instruction.

On rounding a small island, three additional wolves were spotted, and then with drastic suddenness the party was literally surrounded by wolves, running in all directions. The final check agrees there were at least nineteen large timber wolves in the pack.

"Concentrated action was the rule, wolves began to tumble, the car flew faster and faster. Orders came thick and fast. Our back seat gunner's gun jammed until he was almost a patient for a nut house. Front seat gunner almost froze his fingers. Driver was 'crowding 'em too close.' Gunners couldn't get a bead. 'There's one going south'— 'Oh, that big black one's going north.' Back seat gunner yells, 'Stop — two wounded ones behind on the ice and getting away. 'Keep going, there's one about a half-mile ahead,' and so on and on."

When there were no more wolves to be seen, the party started to pick up the results of the chase — seven full-grown timber wolves was the bag. Two of the largest weighed over one hundred and twenty pounds each.

Those are the facts about the hunting trip that made Mr. Bulmer say, "If you need a thrill, try wolf-hunting de luxe — Lake of the Woods style !"

N.S. FARMERS DECLARE FOR CONSERVATION

THE following resolution was passed without a dissenting voice at a meeting of two hundred and fifty members of the Nova Scotia Farmers Association on January 11th at Kentville N.S.

"Whereas it is the opinion of this association that the conservation of our forest resources is a matter of major importance. And Whereas the care and cutting of the farmer's woodlot should be the matter of a sound farming policy to further the conservation of our forests.

"THEREFORE be it resolved that the Government be asked to incorporate within the department of agriculture a farm-forest conservation programme, to be carried along with other programmes of farm management, production and marketing.

BUFFALO AND ELK FOR AUSTRALIA

A SHIPMENT of buffalo and elk, one male and two females of each, went forward by the steamer "Waikawa" from Vancouver last month, destined to Taronga Zoological Park in Sydney, Australia. The animals have been selected from the Government herds in Elk Island National Park, Alberta, where more than 1000 head of buffalo as well as some 900 head of elk, moose, and other deer roam at large over an area of 51 square miles.

Actually, Elk Island National Park is a fenced enclosure, but as far as the wild animals there are concerned they are probably quite unaware that their movements are in any way restricted except, of course, that they are not allowed to visit their cousins in other parts of the country.

At the time that the buffalo, treatened with extinction, were re-established on the western plains of Canada, Elk Island National Park was chosen as the reception centre for the herd purchased by the Canadian Government from a Montana rancher. Later, this herd and its offspring were transferred to Wainwright National Park, also in Alberta — all but a few, too wild to capture. From this small but elusive band has grown the present herd of plains buffalo — one of the finest on the continent.

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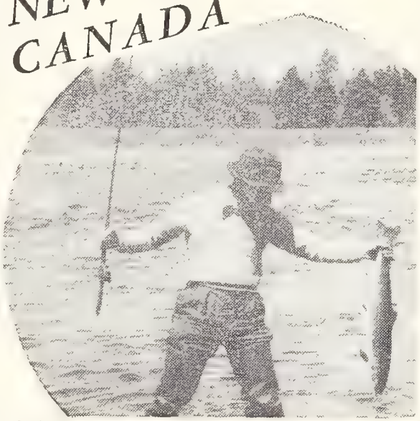

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Ontario Government Foresters Convene

ATTENTION to business was the watchword at the Annual Meeting of the Ontario Department of Lands and Forests, held January 20 — 24th, unlike typical meetings of associations and other organizations in which so often but a scattering of delegates attend the sessions. The conference was divided into five open sessions in the mornings and five closed sessions in the afternoons. In the mornings the discussions were led by each of the eleven division chiefs in turn. In the afternoons the individual problems of each of the seven field Regions were intimately discussed with the divisions concerned. No holds were barred. Twenty-three Regional and District Foresters from all parts of Ontario attended.

The Honourable H. R. Scott, appointed as Minister of the Department only several months previously, in referring to the chairman's introduction, said that he guessed he spoke the language of the forests a bit since he had worked in the bush, on the river and in the sawmill since he was 16 years of age. He said that he appreciated that he was following in the footsteps of a man well known to them all, his predecessor the Honourable W. G. Thompson, a man well skilled in organization and administration, and an all-round good fellow. The Minister stated that in spite of his bush experience he would still probably be asking many questions of the foresters and other officials. In closing, Mr. Scott said that he is looking forward to a year of development and good results.

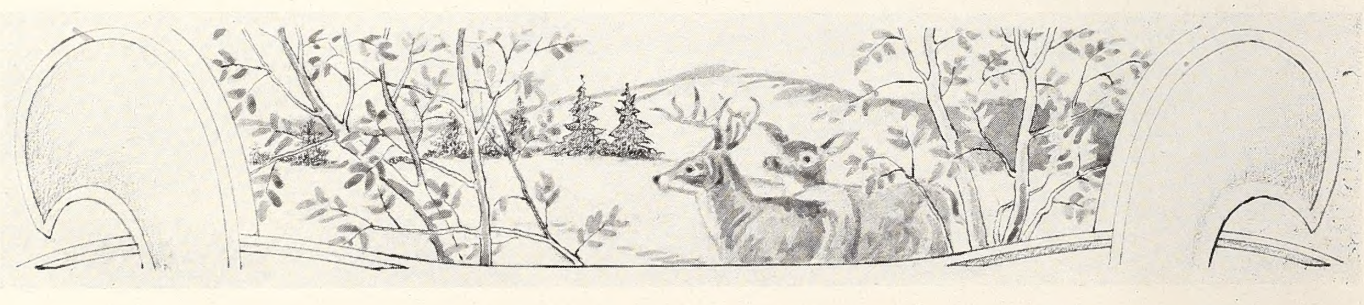
The feature of the conference was the address of Mr. Lloyd Swift who is in charge of Wildlife Management for the United States Forest Service. Mr. Swift, who spoke on the subject of Wildlife Management, related the long experience of his service and stressed the importance of public cooperation in wildlife management. He stated that it had been the experience of the Federal as well as State Governments that without public understanding and support of their management programs, they could not be successful. Mr. Swift pointed out that they had found that too much protection of wildlife often resulted in areas becoming too heavily populated from the standpoint of food supply, which might be obtained from the vegetation. He mentioned that shortage of natural food supply is often much more important to ultimate survival than slaughter by hunters. He accented the close relationship between forests and animals. Good management, he said, entails the care of both.

Mr. E. J. Zavitz, veteran chief of the Division of Reforestation spoke of the development of the recently established nursery at Fort William — intended to supply seedlings for planting in the north-western Ontario area, which had previously depended on Southern Ontario nurseries for stock. He said that the seedlings produced at the Fort William nursery would not be available for the 1947 planting as it takes several years for them to grow to sufficient size. Mr. Zavitz mentioned that the total number of seedlings which will be available from all nurseries for 1947 planting will amount to about twelve to fourteen million trees. In the past the normal requirement for private planting has been from seven to eight million trees annually. County and municipal planting usually require an additional two to three million trees, and departmental projects the balance.

Mr. T. E. Mackey, former Regional and District Forester, and recently appointed Chief of the Division of Forest Protection, said that public education in the matter of forest fire prevention should be strongly stressed by the department. He complimented the office of Information and Education for their work in this regard during the past year. Mr. Mackey also stated that it was most important for the department to enter into practical agreements in forest protection with organized municipalities, so that the highest degree of cooperation possible might be attained. He said further that the issuance of travel permits by licensed tourist outfitters and others had a pronounced effect in reducing fire losses. He mentioned that the large number of fires in the summer of 1946 was due to the extremely dry weather — plus the influx of an abnormally large number of people in search of recreation. He said that in spite of this however, that the area burned had been subnormal due largely to the absence of high winds.

Mr. R. N. Johnston, Chief, Division of Research, outlined the experiments which had been made in the control of insects by the spraying of DDT from aircraft during 1946. He stated that the results of the spraying of spruce budworm were considered to be about 70% effective. Mr. Johnston described surveys which were conducted on Northern Clay Belt soils and the classification of 100,000 acres for the purpose of determining proper land use as between farm and forest. He also spoke of the experiments which were carried out in the Thunder Bay and Kenora Districts on burned-over areas, to determine the effect of fires and the regeneration of trees. He closed by describing experiments which are being conducted in tree planting with special reference to the production of better class seed, its treatment to guard against disease, and the best method of wholesale planting.

The balance of the subjects discussed were either of a highly technical nature or were concerned with personnel management, finance and administration. Mr. P. O. Rhynas, Chief, Division of Operation and Personnel stated that the department fully appreciates that, regardless of the programs which may be drafted, the funds which may be made available, or the equipment which may be provided, the most effective administration will depend largely on the acquisition and retention in the service of the best men obtainable, properly trained, and under good direction.



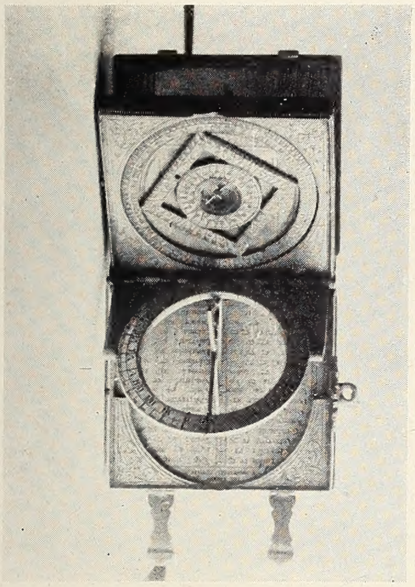
POCKET SUNDIALS

by J. D. U. WARD

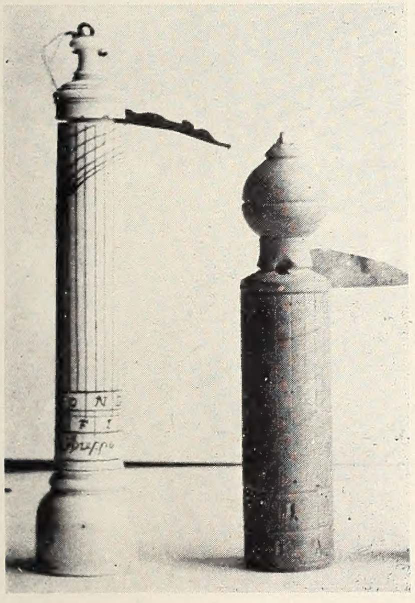
THERE is news from Germany that pocket sundials are being made in considerable quantities, because of the shortage of watches.

Presumably these dials would be made with a fixed gnomon, good for a particular locality, since the accurate setting and use of a universal dial would be byond the capacity of most landsmen today. Mariners, however, would have the requisite knowledge, and so, presumably, would prospectors and others accustomed to working by compass.

There are extant a great number of patterns of pocket dials, which can be worked by the sun, moon or stars, but one of the oldest and simppest was still being made in the Pyrenees about 1900, and the photograph shows an example bought at Argèles in 1899, when it was new. Beside it stands a 18th century example in ivory. It was by some such "chilindre" as the Argèles example that Chaucer's shipman told the time, and Shakespeare refers to this same pattern of "shepherd's dial" as it is commonly termed. A much finer and more elaborate kind of pocket dial, complete with quadrant, compass and other instruments, is the 16th century example which was made by Humphrey Cole, who was instrument-maker to Sir Francis Drake. How many people would be able to make the correct adjustments to tell the time by this instrument at, say, Montreal, and then at Churchill or Edmonton?



A pocket sundial made by Humphrey Cole who was instrument-maker to Sir Francis Drake.



Two column, or Shepperd's dials. One is a French 18th century example, of ivory; the other a modern wooden piece.

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* An excerpt from —"Conservation Common Sense" by G. C. Toner, M.A., in CARLING'S CONSERVATION DIGEST, Vol. 1, No. 1, published by The Carling Conservation Club.

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